

AMENDMENTS TO THE CLAIMS:

1-13. (Cancelled)

14. (Currently Amended) The heat exchanger of claim ~~13~~ 17 wherein said tube runs are defined by individual tubes.

15. (Currently Amended) The heat exchanger of claim ~~13~~ 17 wherein said tube runs are defined by at least one serpentine tube.

 16. (Cancelled)

17. (Currently Amended) ~~The heat exchanger of claim 13~~ An aluminum heat exchanger, comprising:

first and second headers;

at least one flattened tube extending between and in fluid communication with said headers and defining a plurality of generally parallel tube runs in spaced relation to one another;

each said tube runs having opposite edges defining a tube major dimension and interconnecting side walls defining a tube minor dimension and a plurality of interior ports;

a plurality of plate fins arranged in a stack and each having a plurality of open ended tube run receiving slots, one for each tube run, each slot having a shape generally that of the cross-section of the tube run to be received therein, a width equal to or just less than the minor dimension of the corresponding tube run and a depth somewhat less than the major dimension of the corresponding tube run;

each said tube run being nested within corresponding slots in said fins with one of said side walls of each tube run located outwardly of the slots in which it is received; and

said headers, said tube runs and said fins comprising a brazed assembly;
wherein said slots have flange free edges brazed to said tube runs.

18. (Currently Amended) ~~The heat exchanger of claim 13~~ An aluminum heat exchanger, comprising:

first and second headers;

at least one flattened tube extending between and in fluid communication with said headers and defining a plurality of generally parallel tube runs in spaced relation to one another;

each said tube runs having opposite edges defining a tube major dimension and interconnecting side walls defining a tube minor dimension and a plurality of interior ports;

a plurality of plate fins arranged in a stack and each having a plurality of open ended tube run receiving slots, one for each tube run, each slot having a shape generally that of the cross-section of the tube run to be received therein, a width equal to or just less than the minor dimension of the corresponding tube run and a depth somewhat less than the major dimension of the corresponding tube run;

each said tube run being nested within corresponding slots in said fins with one of said side walls of each tube run located outwardly of the slots in which it is received; and

said headers, said tube runs and said fins comprising a brazed assembly;
wherein said fins are curved at locations between said slots.

19. (Currently Amended) The heat exchanger of claim ~~13~~ 17 wherein said plate fins are elongated and said slots open to one elongated edge thereof, the other elongated edge being uninterrupted by said slots.

20. (Currently Amended) ~~The heat exchanger of claim 19 including~~ An aluminum heat exchanger, comprising:
first and second headers;

at least one flattened tube extending between and in fluid communication with said headers and defining a plurality of generally parallel tube runs in spaced relation to one another;

each said tube runs having opposite edges defining a tube major dimension and interconnecting side walls defining a tube minor dimension and a plurality of interior ports;

a plurality of plate fins arranged in a stack and each having a plurality of open ended tube run receiving slots, one for each tube run, each slot having a shape generally that of the cross-section of the tube run to be received therein, a width equal to or just less than the minor dimension of the corresponding tube run and a depth somewhat less than the major dimension of the corresponding tube run;

each said tube run being nested within corresponding slots in said fins with one of said side walls of each tube run located outwardly of the slots in which it is received;

said headers, said tube runs and said fins comprising a brazed assembly;

wherein said plate fins are elongated and said slots open to one elongated edge thereof, the other elongated edge being uninterrupted by said slots;
and

further comprising a stiffening bead between said other elongated edge and said slots.

21. (Original) The heat exchanger of claim 18 wherein said plate fins are elongated and said slots open to both elongated edges thereof.

22. (Original) The heat exchanger of claim 21 wherein the slots opening to one of said elongated edges are aligned with the slots opening to the other of said elongated edges.

23. (Original) The heat exchanger of claim 21 including an elongated uninterrupted band extending in the direction of elongation of said plate fins located between the slots opening to said one elongated edge and the slots opening to said other elongated edge.

24. (Original) The heat exchanger of claim 21 wherein said tube runs are defined by the legs of U-shaped tubes, one of said legs of each U-shaped tube being disposed in a slot opening to one elongated edge of said plate fin and the other leg being disposed in a slot opening to the other elongated edge.

25. (Original) The heat exchanger of claim 24 wherein the slots opening to opposite ones of said elongated edges are aligned and the legs of each said U-shaped tube are located in aligned ones of said slots.

26. (Original) The heat exchanger of claim 25 wherein each of said legs of each of said U-shaped tubes includes an angled twist of an angle up to and including 90° immediately adjacent the bight of the corresponding U-shaped tube.

27. (Currently Amended) The heat exchanger of claim ~~13~~ 17 wherein said parallel tube runs are defined by a plurality of U-shaped tubes, each having two parallel legs connected by a bight and there are two sets of said plate fins, one set disposed on corresponding first ones of the legs and the other set disposed on corresponding others of the legs.

28. (Previously Presented) The heat exchanger of claim 27 wherein each of said legs of each of said U-shaped tubes includes a 90° twist immediately adjacent a bight of the corresponding U-shaped tube.

29. (Original) A heat exchanger core comprising:
a plurality of generally parallel tube runs formed of flattened, multi-port tubing; and
a plurality of plate fins in a stacked relation and having spaced openings sufficient to receive said tube runs;

said tube runs being disposed in said openings and having a major dimension brazed to the plate fins about said openings;

the parts of said plate fins between the openings being arcuate in a direction generally transverse to said major dimension to thereby increase the surface area of the fins between the openings without the need to increase the spacing between adjacent openings.

30. (Original) The heat exchanger of claim 29 wherein said openings are slots extending into the fins from one edge thereof.

31. (Currently Amended) An aluminum heat exchanger, comprising:
first and second headers;

at least one flattened tube extending between and in fluid communication with said headers and defining a plurality of generally parallel tube runs in spaced relation to one another;

each said tube run having opposite edges defining a tube major dimension and interconnecting side walls defining a tube minor dimension and a plurality of interior ports;

a plurality of elongated plate fins arranged in a stack and each having a plurality of open-ended elongated, aligned tube run receiving slots with the slots

opening to an elongated edge of the fins, one for each tube run, each slot having a shape generally that of the cross-section of the tube run received therein, a width equal to or just less than the minor dimension of the corresponding tube run and a depth somewhat less than the major dimension of the corresponding tube run;

each said tube run being nested within corresponding aligned slots in said fins with one of said side walls of each tube run located outwardly of the slots in which it is received; and

said headers, said tube runs and said fins comprising a brazed assembly;
wherein said slots have flange free edges brazed to said tube runs.



32. (Previously Presented) The heat exchanger of claim 31 wherein said slots are at a substantial angle to the direction of elongation of said fins.

33. (Previously Presented) The heat exchanger of claim 32 wherein said slots are at about 90° to the direction of elongation of said fins.

34. (New) The heat exchanger of claim 17 wherein said fins are curved at locations between said slots.